
A SMALL LATE WOODLAND HEARTH NEAR PIONEER, OHIO¹

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ABSTRACT

A small prehistoric hearth, located 1½ miles southwest of Pioneer, in Williams County, Ohio, was excavated on October 5, 1967, by a group of soils scientists, while on a field conference. The hearth, two to three feet across by about two feet deep, yielded some fragments of charcoal (*Quercus*), a few wood snails (*Mesodon inflectus*), small broken mammal bones (*Blarina brevicauda*, Indian dog, and turtle-carapace scraper), and a few pottery sherds. No projectile points were found, either in the filling of the hearth depression nor on the surface of the adjacent plowed field, although chert chips were present in the field. A diorite hammerstone was also recovered from the field.

Most informative in terms of dating the site was the pottery, despite its small and fragmentary nature. Two different specialists (R. S. Baby and D. W. Dragoo), working independently, both identified the hearth occupation, on the basis of the pottery, as Late Woodland (Cole Culture), dated at approximately 900-1100 years A.D.

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INTRODUCTION

A small prehistoric hearth was discovered on October 5, 1967, in a gravel pit a few miles southwest of Pioneer, Ohio, during a routine field conference by a group of soils scientists. Mr. Donald E. McCormack, State Soils Scientist for the Soil Conservation Service, first recognized the hearth and did much of the brief excavation that followed. The other soil scientists in the group (Cecil Flesher and Ken Stone of the Soil Conservation Service in Williams County, Dick Jones of the Ohio Division of Lands and Soil, Larry Wilding of The Ohio State University) and I all helped, both in the excavation of the hearth and in the search of the adjacent plowed field for additional evidences of occupation.

No more than an hour was spent collecting the samples from and information about this small, insignificant site. Publication of these data and documentation of this small hearth still seemed desirable, however, because a variety of data were obtained from it and because it would undoubtedly soon be destroyed by subsequent gravel-pit operations.

ACKNOWLEDGEMENTS

Appreciation is here expressed to Dr. Claude W. Hibbard, of The University of Michigan, for identification of the small fragments of mammal bones; to Dr. Aurèle La Rocque, of The Ohio State University, for identification of the few snail shells; to Dr. George W. Burns, of Ohio Wesleyan University, for identification of the charcoal; and to both Dr. Raymond S. Baby, of The Ohio State University and the Ohio State Historical Museum, and Dr. Don W. Dragoo, of the Carnegie Museum, Pittsburgh, for identification of the small pottery sherds.

The cooperation of the members of the soils conference, both in excavating the hearth and in searching the adjacent plowed field, must also be acknowledged. And, in particular, appreciation is due to Mr. Donald E. McCormack, who first recognized the hearth and whose enthusiastic curiosity led to its excavation and the observations recorded here.

LOCATION

The hearth occurred along the south margin of a very small gravel pit $1\frac{1}{2}$ miles southwest of Pioneer, Ohio (NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of section 30, Bridgewater Township, Williams County, Ohio). It was located close to the surface, within the soil zone (Kalamazoo soil), in material being removed as overburden by the gravel-pit operator (who was not present when the group of soil scientists stopped at the site). The hearth was approximately two to three feet across and about two feet deep. The sides were almost vertical and the base was slanted gently, meeting the bases of the sides in sharp curves. The horizontal pattern of the hearth could not be determined, because of the partial destruction of it by the gravel-pit operations, but it looked as if it might have been generally circular. Plowing had also helped to destroy its characteristic appearance at and near the surface.

Part of the hearth depression was filled with a mass of light-colored silty clay. The rest of the filling was composed of a mixture of silt, sand, and refuse—charcoal, pottery fragments, small bones, and a few snail shells. No projectile points were found, either in the hearth filling nor on the surface of the broad plowed field adjacent to the site, though a small number of chips of white chert were observed in the field. In addition, the field yielded a rounded, diorite cobble, approximately four inches long, that showed some abrasion or "pockmarking," at each end, suggestive of its use as a hammerstone.

GEOLOGY

The site was located in a broad shallow gravel terrace along a small, unnamed, intermittent stream, tributary from the northwest to the West Branch of the

St. Joseph River. The surface of the gravel terrace lies only a few feet below the surface of the adjacent ground moraine. The gravel is at least ten feet deep close to the site, as was demonstrated by this thickness of gravel above the standing water in the gravel pit, some twenty feet to the north of the hearth. Because the

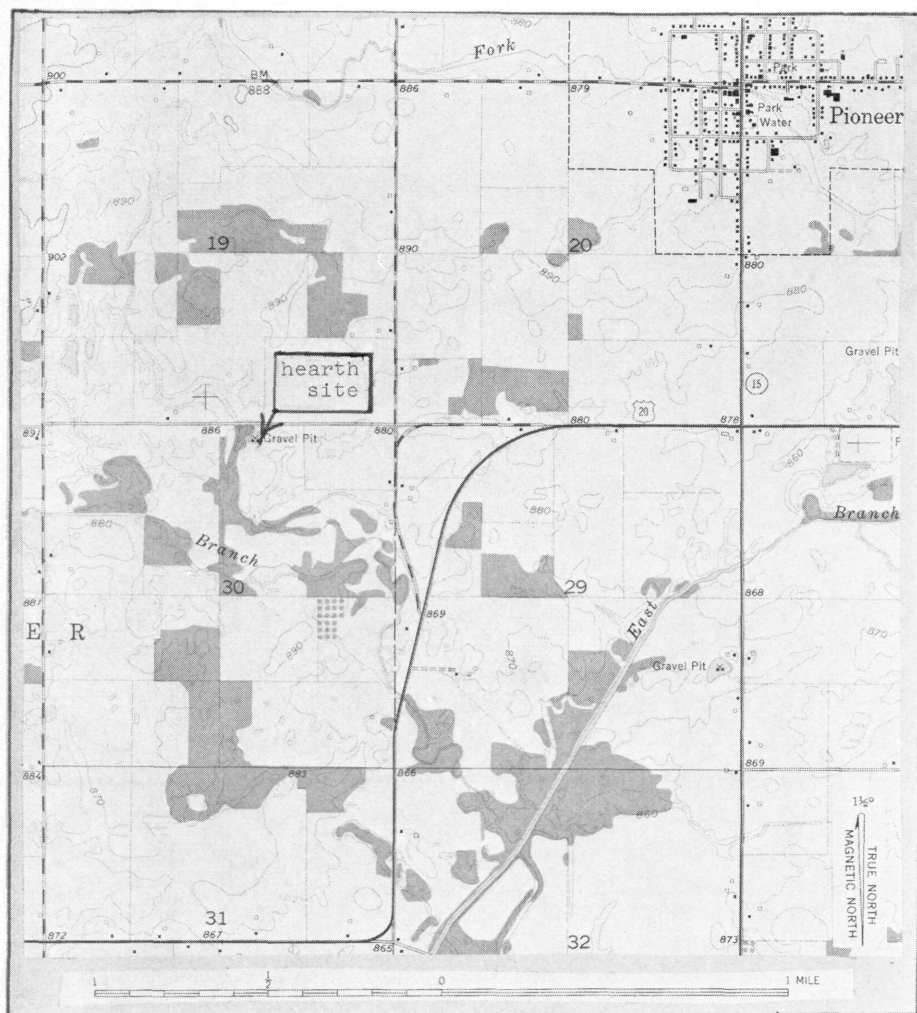


FIGURE 1. Map showing location of hearth site one and a half miles southwest of Pioneer in Williams County, Ohio.

valley was so very shallow, despite its rather great width, and because of the gentle gradient and intermittent nature of the stream, it is unlikely that the gravel extends much deeper. Ground moraine in this area lies between the Wabash Moraine two miles to the northwest and the Fort Wayne Moraine six miles to the southeast. Between the Fort Wayne Moraine and the site is a broad flat gravel deposit along the East (main) Branch of the St. Joseph River.

IDENTIFICATION OF ARTIFACTS AND OTHER MATERIALS RECOVERED FROM HEARTH

A variety of materials characteristic of hearth sites were recovered by the excavation: a few snail shells, some charcoal, some broken fragments of small mammal bones, and some pottery sherds. In all cases, the materials retrieved were extremely small and fragmentary, only a few of the specimens being identifiable, so that inferences about the use and significance of these materials to those who had occupied this site are extremely limited.

Snails

The three of four snail shells recovered from the excavation of the hearth were all identified by Dr. Aurèle La Rocque as "*Mesodon inflectus* (Say), a land snail not too rare in Ohio, ranging north into Michigan, and south into Oklahoma, Louisiana, Mississippi, Alabama, Georgia, North and South Carolina. It is a hygrophile, living under logs and leaf mold in deep and medium shade of trees; can adjust to crannies in stone walls and rotting timbers; prefers hardwood forest. Recorded for Sangamon? of Indiana and various late Wisconsin deposits in Ohio" (personal communication, October 27, 1967).

These snail shells were probably brought to the site by the peoples using the hearth, because of the intimate association of these shells with other objects that were more clearly artifact. Whether these were part of the diet of those prehistoric Indians or whether they were merely objects of interest (perhaps mainly to the children?) could not be deduced from this site. The fact that only a very few shells were found would perhaps argue against their being a significant source of food at that time.

Identification of this one species of snail tells nothing about the date of this site. Even with large snail populations, dating based on identifications is not possible in the short interval of postglacial time. Differences in species mainly record differences in climate. It is interesting that the one species present here should be a snail whose present range is generally a little more southern. Was the climate at that time just a little warmer than today? With only one species of snail present, and this species represented by only a few shells, no meaningful interpretation, of course, is actually possible.

Charcoal

A moderate amount of charcoal was present in the hearth filling, though most of the fragments were very small and generally broadly disseminated. A few somewhat larger pieces (an inch or so in size) were recovered and sent to Dr. George W. Burns for identification. He found them all to be oak (*Quercus*), a genus of tree which is represented in the area today by several species: white oak (*Quercus alba*), black oak (*Quercus velutina*), red oak (*Quercus rubra*), and locally swamp white oak (*Quercus bicolor*).

It would appear that this was simply wood used in as fuel for their fire. That it was oak rather than any other species of trees, I suspect, simply means that this wood was handy when these early men needed firewood.

Bones

A few very small bone fragments were found in the fill of the hearth. These bones were sent to Dr. Claude W. Hibbard for identification. Dr. Hibbard reports: "I could not identify the ones labeled scrap. One does look like it could be a piece of rib. The identifiable parts are a left lower jaw of *Blarina brevicauda*, the Shorttail Shrew, now living in that area. There are also two metatarsals of a small canid, probably Indian dog, as they did not match exactly those of red or gray fox. There is no evidence that the bones have ever been cooked, but they have been broken.

"The piece of turtle shell is from a pond and river turtle. It has been worked [by man]. That is, it is so worn off on one edge and so small that George Zug could

not identify it. It is most certain that the larger piece of carapace was used as a scraper and that this piece broke off" (personal communication, October 31, 1967).

One would suspect that the bones might represent kitchen refuse. However, it is interesting that Dr. Hibbard saw no evidence of the bones ever having been cooked. Did these early Ohioans eat their meat raw, despite the fire that clearly burned in their hearth? Or did they cook and eat only other parts of the animals? If so, what happened to those bones which were cooked, for no other bones were found. Clearly, no satisfactory answer is possible from the meagre data provided by this single site.

Pottery sherds

Of greatest significance in terms of what is possible in dating and in determining something of the culture of the occupants of this site are the fragments of pottery. Because the fragments were so small and therefore so difficult to identify, they were sent independently to two different experts, Dr. Raymond S. Baby, Curator of Archaeology at the Ohio Historical Museum in Columbus, and Dr. Don W. Dragoo, Curator of the Section of Man at Carnegie Museum in Pittsburgh.

Dr. Baby commented: "The five pot sherds represent four vessels. Based on the paste, tempering material (medium to coarse grit), and the surface treatment of a haphazard, coarse to fine cordmarking, these specimens are most certainly Woodland and can be assigned to the Cole Company [Baby and Potter 1965] or culture (dated at approximately 900 to 1100 A.D.)" (personal communication, December 22, 1967).

Dr. Dragoo reported: "These small pottery sherds probably belong in the Late Woodland Period at about 1000 A.D. \pm 150. The texture of the cord marking is somewhat similar to the early Iroquoian material which I believe to have had close ties with the Late Woodland in northeastern Ohio. The grit tempering and general paste characteristics are also shared" (personal communication, March 1, 1968).

It should be pointed out that neither of these specialists saw the analysis of the other before reaching his own decision. It would seem quite clear, then, that the pottery fragments, and therefore the entire site, are of Late Woodland (Cole Culture) age, representing an occupation dated at approximately 1000 A.D.

POSSIBLE INFERENCES ABOUT THE OCCUPANTS OF THE SITE

The small hearth found in the soil zone of a gravel pit $1\frac{1}{2}$ miles southwest of Pioneer, Ohio, was apparently a temporary campsite occupied for a short period of time by a small group of prehistoric Indians. The lack of finished projectile points (though some chipping of points was done here) and the absence of cooked animal bones means that very little can be interpreted about the life of those who made the hearth. Oak wood from adjacent woods served as fuel for the fire. The hammerstone may have been used for cracking nuts or seeds, for driving posts to support some sort of dwelling, or for chipping the tools that produced the chert flakes. Pottery was included in their kitchen equipment, so some forms of food were stored.

The pottery fragments found were particularly important in this study, because they provided the only basis for dating the site. According to the judgments of two independent professional archaeologists, this hearth was made during Late Woodland (Cole Culture) time, dated at approximately 900 to 1100 years A.D., or about 500 years before the invasion of the white Europeans into this area.

REFERENCE CITED

- Baby, R. S. and Martha A. Potter. 1965. The Cole Complex: a preliminary analysis of the Late Woodland ceramics in Ohio and their relationship to the Ohio Hopewell Phase. Ohio State Museum Papers in Archaeology of the Ohio Historical Society, No. 2, 7 p.